

The Spider Family Theridiidae (Arachnida: Araneae) from the Krakatau Islands, Indonesia

Hajime YOSHIDA¹⁾

吉田 戡¹⁾: インドネシアクラカタウ諸島産のヒメグモ科
(クモ綱: クモ目)

Abstract Eleven species of the family Theridiidae are recorded from the Krakatau Islands, Indonesia. A new species, *Thymoites nentwigi* sp. nov., is described, and the generic characteristics of *Thymoites* are given.

Through the kindness of W. NENTWIG, I had an opportunity to study some spiders from the Krakatau Islands, Indonesia. According to the species list of DAMMERMAN (1948), 59 species of spiders are recorded from the islands. Among them, two species, *Theridion rufipes* LUCAS, 1846 and *Achaearanea tepidariorum* (C. KOCH, 1841), are known under Theridiidae. In this paper, I wish to report 11 species of the family Theridiidae from the Krakatau Islands, including *Argyrodes xiphias* THORELL, 1887 already reported in my previous paper (YOSHIDA, 1993).

All the specimens recorded in this paper were collected by W. NENTWIG from August the 17th to September the 4th, 1990. Most of the materials were collected on Anak Krakatau Island, and a few spiders were collected from Sertung, Panjang or Rakata Islands. The spiders were collected with sweepnet, hand and pitfall trap. Pitfall trap was used only on Anak Krakatau Island.

Abbreviations used in this paper are as follows: ALE, anterior lateral eyes; AME, anterior median eyes; MOA, median ocular area; PLE, posterior lateral eyes; PME, posterior median eyes.

Before going further, I wish to express my sincere thanks to Prof. Dr. Wolfgang NENTWIG, Universität Bern, for offering valuable specimens for the present study, and to Emeritus Prof. Dr. Takeo YAGINUMA, Otomon Gakuin University, Osaka, and Dr. Hirotugu ONO, National Science Museum, Tokyo, for their continuous guidance in the course of my study.

Dipoena mustelina (SIMON, 1888)

Euryopsis mustelina SIMON, 1888, p. 251.

Dipoena mustelina: YAGINUMA, 1967, p. 88; 1968, p. 34, pl. 7, fig. 42; 1986, p. 42, pl. 10, fig. 3, text-fig. 23–3.

1) 7–16, Kagota 2 Chome, Yamagata-shi, Yamagata, 990 Japan

〒990 山形市籠田 2 丁目 7 番 16 号

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Specimen examined. Anak Krakatau: 1♀.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau). Japan, Korea, Taiwan and China.

Argyrodes xiphias THORELL, 1887

Argyrodes xiphias THORELL, 1887, p. 25.—WORKMAN, 1986, p. 63, pl. 63.—YOSHIDA, 1993, p. 83, figs. 1–4.

Specimens examined. Sertung: 4♀, 1♀ juv.

Distribution. Indonesia: Krakatau Islands (Sertung). Japan, Taiwan, China, Burma, Singapore and India.

Argyrodes miniaceus (DOLESCHALL, 1857)

Theridion miniaceum DOLESCHALL, 1857, p. 408.

Argyrodes miniaceus: THORELL, 1878, p. 138.—YAGINUMA, 1986, p. 51, pl. 12, fig. 1, text-fig. 28–1.

Conopistha miniacea: YAGINUMA, 1968, p. 32, pl. 6, fig. 29.

Specimens examined. Sertung: 2♀ juv.

Distribution. Indonesia: Krakatau Islands (Sertung). Widely distributed from the South Pacific areas to Japan.

Steatoda nasata (CHRYSANTHUS, 1975)

Lithyphantes nasatus CHRYSANTHUS, 1975, p. 36, figs. 134–137.

Steatoda nasata: BRIGNOLI, 1983, p. 412.

Specimens examined. Anak Krakatau: 15♀, 2♂, 3♀ juv., 3♂ juv.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau). New Guinea.

Anelosimus taiwanicus YOSHIDA, 1986

Anelosimus taiwanicus YOSHIDA, 1986, p. 33, figs. 4–8.

Specimens examined. Anak Krakatau: 1♀, 1♂.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau). Taiwan.

Dipoenura fimbriata SIMON, 1909

Dipoenura fimbriata SIMON, 1909, p. 95.—LEVI & LEVI, 1962, figs. 157–159.

Specimens examined. Sertung: 2♂, 1♀ juv.

Distribution. Indonesia: Krakatau Islands (Sertung). Vietnam.

Theridion adamsoni BERLAND, 1934

Theridion adamsoni BERLAND, 1934, p. 102, figs. 6–9.—LEVI, 1967, p. 181, figs. 20–23.

Specimens examined. Anak Krakatau: 3♀, 1♂.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau). Widely distributed in the temperate areas of the world.

Chryso spiniventris (O. PICKARD-CAMBRIDGE, 1869)

Theridion spiniventre O. PICKARD-CAMBRIDGE, 1869, p. 384, pl. 12, figs. 52–56.

Chryso spiniventris: YAGINUMA, 1978, p. 15; 1986, p. 46, text-fig. 24–5.

Specimens examined. Anak Krakatau: 8♀, 2♂, 4♀ juv. Rakata: 1♀, 1♂. Panjang: 3♀, 4♂, 4♀ juv.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau, Rakata and Panjang). Japan, Taiwan, China and Sri Lanka.

Coleosoma blandum O. PICKARD-CAMBRIDGE, 1882

Coleosoma blandum O. PICKARD-CAMBRIDGE, 1882, p. 427, pl. 29, fig. 3.—LEVI & LEVI, 1962, fig. 107.—YAGINUMA, 1986, p. 48, pl. 11, fig. 5, text-fig. 26–3.

Specimens examined. Anak Krakatau: 2♀, 3♀ juv., 1♂ juv.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau) and Bali. Japan, China, the Philippines and Sri Lanka.

Achaeearanea decorata (L. KOCH, 1867)

Theridium decoratum L. KOCH, 1867, p. 188.

Achaeearanea decorata: CHRYSANTHUS, 1963, p. 743, figs. 84–88.—LEVI *et al.*, 1982, p. 107, figs. 6–7.

Specimens examined. Anak Krakatau: 1♀, 2♂, 3♀ juv. Panjang: 2♀, 4♀ juv. Sertung: 3♀, 2♂.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau, Panjang and Sertung). Australia and New Guinea.

Thymoites KEYSERLING, 1884

Thymoites KEYSERLING, 1884, p. 161.—LEVI & LEVI, 1962, P. 47.—LEVI, 1964, p. 448.

Total length of male less than 2.0 mm; female less than 2.5 mm. Basal color brown, yellowish brown or reddish orange. The male carapace usually with an anterior projection. Legs relatively short; first leg longest, the first patella and tibia 0.9 to 1.8 times the carapace length, tarsal comb present. Abdomen sub-spherical, sometimes with ventral and dorsal sclerotized plate or spots in male. Colulus absent. Seminal receptacles one pair. Male palpus with all sclerotice.

This genus closely resembles *Theridion*, but is distinguished from the latter by the following points: Basal color is brown, yellowish brown or reddish orange usually without dorsal flecks; body is small; legs are relatively short; abdomen is sub-spherical, sometimes with sclerotized plate in male. *Thymoites* also resemble *Achaeearanea*, *Chryso* and *Coleosoma*, but are distinguished from *Achaeearanea* by the male palpus having a radix and a free median apophysis, from *Chryso* and

Coleosoma by the abdomen lacking a posterior extension or an anterior sclerotized ring.

This genus is probably cosmopolitan but the spiders of the genus are distributed mainly in America. (LEVI & LEVI, 1962; LEVI, 1964).

Thymoites nentwigi sp. nov.

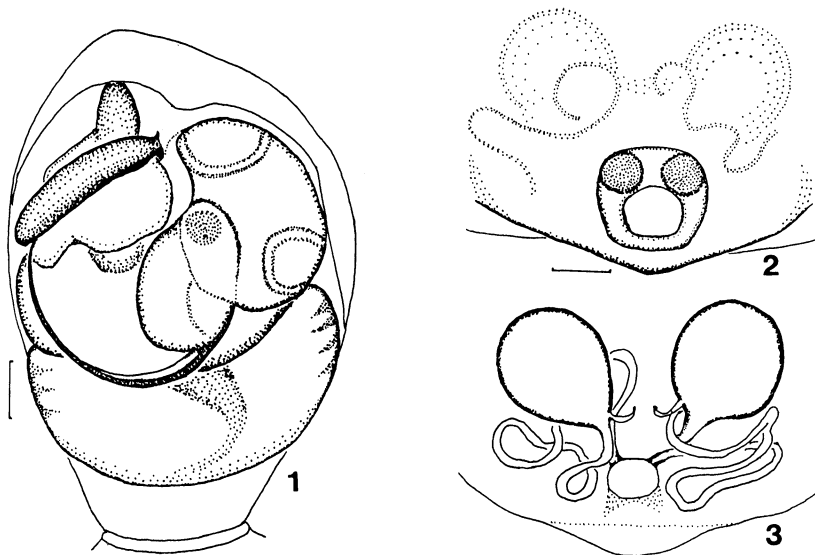
(Figs. 1-3)

Male (holotype). Total length 1.89 mm. Carapace length 0.92 mm; width 1.00 mm. Abdomen length 1.24 mm; width 1.00 mm; height 1.08 mm. First leg: femur 1.00 mm; patella and tibia 1.18 mm; metatarsus 1.00 mm; tarsus 0.55 mm. Second patella and tibia 1.00 mm; third patella and tibia 0.76 mm; fourth patella and tibia 1.03 mm.

Carapace circular, slightly wider than long, without tubercles on eye region. Eyes almost equal in size. AME two-thirds their diameter apart and one-third from ALE. PME two-thirds their diameter apart and from PLE. ALE and PLE almost touching. Ratio of MOA, anterior width: posterior width: length=8: 8: 7. Abdomen subspherical, slightly longer than high, higher than wide, epigastric area sclerotized. Palpal organ as shown in Fig. 1; radix thick and large.

Coloration (in alcohol). Carapace, chelicerae, maxillae, labium and sternum light yellow. Eyes on the dark bases. Legs dusky brown without flecks. Abdomen light yellow with brown hairs, epigastric area dusky brown.

Female (allotype). Similar to male, but differs in the following points: Total length 2.05 mm. Carapace length 0.92 mm; width 0.92 mm. Abdomen length 1.37 mm; width 1.05 mm; height 1.32 mm. First leg: femur 1.18 mm; patella and



Figs. 1-3. *Thymoites nentwigi* sp. nov.—1, Male palpus, ventral view; 2, epigynum, ventral view; 3, female genitalia, dorsal view. (Scales: 0.05 mm.)

tibia 1.20 mm; metatarsus 0.89 mm; tarsus 0.53 mm. Second patella and tibia 1.00 mm; third patella and tibia 0.74 mm; fourth patella and tibia 1.03 mm.

Carapace circular, as long as wide. PME larger than the others (6: 5). AME their diameter apart and three-fifths from ALE. PME five-sixths their diameter apart and from PLE. MOA almost square. Genital organ as shown in Figs. 2-3; the opening distinct; ducts long.

Type series. Holotype: ♂, and allotype: ♀, Anak Krakatau Island, Krakatau Islands, Indonesia, 17-VIII~4-IX-1990, W. NENTWIG leg. (NSMT-Ar 3181-3182). Paratypes: 1♂, 1♀ (NSMT-Ar 3183), 5♂, 1♀, same data as for the holotype. 1♀, Sertung Island, Krakatau Islands, Indonesia, 17-VIII~4-IX-1990, W. NENTWIG leg.

Other specimens. Many juveniles, same data as for the holotype.

Distribution. Indonesia: Krakatau Islands (Anak Krakatau and Sertung).

Remarks. This species is similar to *Thymoites maderae* (GERTSCH et ARCHER, 1942), *T. unimaculatus* (EMERTON, 1882) and *T. marxi* (CROSBY, 1906) described from North America in general appearance and coloration, but is distinguished from them by the male palpus with thick and large radix and the female genitalia with long ducts.

The holotype, allotype and some paratypes are preserved in the collection of the National Science Museum (Natural History), Tokyo, and remaining paratypes are tentatively deposited in my private collection.

Etymology. The specific name is after Prof. Dr. Wolfgang NENTWIG, Universität Bern.

摘 要

インドネシアクラカタウ諸島産のヒメグモ科のクモ 11 種を記録した。そのうち 1 種は新種で、*Thymoites nentwigi* sp. nov. として記載し、あわせて *Thymoites* 属の特徴を記載した。

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